

DOCKET NO. PHN 17,459 (PHIL06-17459)

U.S. SERIAL NO. 09/575,605

PATENT

IN THE CLAIMS:

Please amend the claims as follows.

1. (Previously Presented) A transmission system for transmitting datawords via a multicarrier signal from a transmitter to a receiver, the transmitter comprising:

a generator for generating for each dataword alternative digital sequences; and

a selector for selecting an alternative digital sequence with a lowest peak power value for transmission to the receiver,

wherein the generator is operable to combine mutually different digital words with the dataword to form the alternative digital sequences.

2. (Previously Presented) A transmission system according to Claim 1, wherein the generator comprises:

an augmentor for generating intermediate sequences by combining the digital words with the dataword; and

a scrambler for scrambling the intermediate sequences to form the alternative digital sequences.

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3. (Previously Presented) A transmission system according to Claim 2, wherein the augmentor is operable to generate 2^r intermediate sequences by combining all possible digital words of length r with the dataword.

4. (Previously Presented) A transmission system according to Claim 1, wherein the generator comprises:

- a splitter for splitting the dataword and the digital words into fragments; and
- a combiner for combining the fragments to form the alternative digital sequences.

5. (Previously Presented) A transmission system according to Claim 1, wherein the selector comprises:

- an Inverse Discrete Fourier Transformer for calculating for each alternative digital sequence an Inverse Discrete Fourier Transform (IDFT);
- means for determining for each alternative digital sequence a maximum of the calculated IDFT values; and
- means for selecting an alternative digital sequence with a lowest maximum for transmission to the receiver.

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6. (Previously Presented) A transmitter for transmitting datawords via a multicarrier signal to a receiver, the transmitter comprising:

a generator for generating for each dataword alternative digital sequences; and

a selector for selecting an alternative digital sequence with a lowest peak power value for transmission to the receiver,

wherein the generator is operable to combine mutually different digital words with the dataword to form the alternative digital sequences.

7. (Previously Presented) A transmitter according to Claim 6, wherein the generator comprises:

an augmentor for generating for each dataword intermediate sequences by combining the digital words with the dataword; and

a scrambler for scrambling the intermediate sequences to form the alternative digital sequences.

8. (Previously Presented) A transmitter according to Claim 7, wherein the augmentor is operable to generate 2^r intermediate sequences by combining all possible digital words of length r with the dataword.

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9. (Previously Presented) A transmitter according to Claim 6, wherein the generator comprises:

- a splitter for splitting the dataword and the digital words into fragments; and
- a combiner for combining the fragments to form the alternative digital sequences.

10. (Currently Amended) A transmitter according to Claim 6, wherein the selector comprises:

- an Inverse Discrete Fourier Transformer for calculating for each alternative digital sequence an Inverse Discrete Fourier Transform (IDFT);
- means for determining for each alternative digital sequence a maximum of the calculated IDFT values; and
- means for selecting the alternative digital sequence with a lowest maximum for transmission to the receiver.

11. (Currently Amended) A method of transmitting datawords via a multicarrier signal from a transmitter to a receiver comprising the steps of:

- generating for each dataword alternative digital sequences; and
- selecting an alternative digital sequence with a lowest peak power value for transmission to the receiver,

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wherein the step of generating the alternative digital sequences comprises the step of combining mutually different digital words with the dataword to form the alternative digital sequences.

12. (Previously Presented) A method of transmitting datawords via a multicarrier signal according to Claim 11, wherein the step of combining mutually different digital words with the dataword comprises the steps of:

generating intermediate sequences by combining the digital words with the dataword,
scrambling the intermediate sequences to form the alternative digital sequences.

13. (Previously Presented) A method of transmitting datawords via a multicarrier signal according to Claim 12, wherein 2^r intermediate sequences are generated by combining all possible digital words of length r with the dataword.

14. (Currently Amended) A method of transmitting datawords via a multicarrier signal according to Claim 11, wherein the step of combining mutually different digital words with the dataword comprises the steps of:

splitting the dataword and the digital words into fragments,
combining the fragments to form the alternative digital sequences.

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15. (Currently Amended) A method of transmitting datawords via a multicarrier signal according to Claim 11, wherein the step of selecting an alternative digital sequence with a lowest peak power value comprises the steps of:

calculating for each alternative digital sequence an Inverse Discrete Fourier Transform (IDFT),

determining for each alternative digital sequence a maximum of the calculated IDFT values,

selecting an alternative digital sequence with a lowest maximum for transmission to the receiver.

16. (Withdrawn) A transmission system according to Claim 1, further comprising a receiver, wherein the receiver is operable to:

receive the alternative digital sequence; and

restore the dataword from the alternative digital sequence.

17. (Withdrawn) A transmission system according to Claim 2, further comprising a receiver, wherein the receiver is operable to:

receive the alternative digital sequence;

descramble the alternative digital sequence; and

restore the dataword by deleting the digital word from the descrambled alternative digital sequence.

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18. (Withdrawn) A method of transmitting datawords via a multicarrier signal according to Claim 11, further comprising the steps of:

receiving the alternative digital sequence; and

restoring the dataword from the alternative digital sequence.

19. (Withdrawn) A method of transmitting datawords via a multicarrier signal according to Claim 12, further comprising the steps of:

receiving the alternative digital sequence;

descrambling the alternative digital sequence; and

restoring the dataword by deleting the digital word from the descrambled alternative digital sequence.

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